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Amendment to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listing of claims in the application.

Listing of Claims

1. (Currently Amended)   Information carrier comprising a integrated circuit ~~(1)~~ representing a physical unclonable function comprising:

an input means ~~(7)~~ for receiving a challenge signal for challenging said integrated circuit ~~(1)~~,

a response signal providing means ~~(2)~~ for providing a response data signal in response to said challenge data signal,

an output means ~~(8)~~ for outputting said response data signal, and

a delay means ~~(3, 5, 9-12)~~ **comprising an analog noise source for adding a noise signal to the response data signal provided by said response signal providing means, the delay means** for delaying and/or prohibiting **a** ~~the~~ provision and/or the output of said response data signal.

2. (Currently Amended) Information carrier as claimed in claim 1, wherein ~~characterized in that~~ said response signal providing means comprise a memory ~~(2)~~ for storing pairs of challenge data and associated response data.

3. (Currently Amended) Information carrier as claimed in claim 1, wherein ~~characterized in that~~ said response signal providing means ~~(2)~~ comprise a response signal generation means ~~(13), in particular an encryption unit,~~ for generating a response data signal in response to a challenge data signal.

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4. (Original)   Information carrier as claimed in claim 1, wherein ~~characterized in that~~ said delay means comprise a noise source ~~(3)~~ for adding a noise signal to the response signal provided by said response signal providing means ~~(2)~~.

5. (Currently Amended) Information carrier as claimed in claim 1, wherein ~~characterized in that~~ said delay means comprise a noisy read-out means, **~~in particular a noisy read-out amplifier~~** for amplifying the response signal provided by said response signal providing means ~~(2)~~.

6. (Currently Amended) Information carrier as claimed in claim 1, wherein ~~characterized in that~~ said delay means comprise analog limiting means ~~(9-12)~~ for restricting the number of response data signals provided and/or outputted per time unit.

7. (Currently Amended) Information carrier as claimed in claim 6, wherein ~~characterized in that~~ said limiting means comprise means ~~(9-12)~~ for limiting the amount of power available per time unit.

8. (Currently Amended) Information carrier as claimed in claim 1, wherein ~~characterized in that~~ said delay means comprise a counter means ~~(14)~~ for limiting **~~the number of responses, in particular~~** the total number of responses or the number of times the response to a given challenge can be provided, of said integrated circuit ~~(1)~~.

9. (Currently Amended) Integrated circuit ~~(1)~~ representing a physical unclonable function**~~, in particular~~** for use in an information carrier, comprising:

an input means ~~(7)~~ for receiving a challenge signal for challenging said integrated circuit ~~(1)~~,

a response signal providing means ~~(2)~~ for providing a response data signal in response to said challenge data signal,

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an output means (8) for outputting said response data signal, and

a delay means (3, 5, 9-12) for delaying and/or prohibiting a the provision and/or the output of said response data signal by adding a noise signal generated from an analog noise source.

10. (Currently Amended) Method of providing a physical unclonable function comprising the steps of:

receiving a challenge signal for challenging an said integrated circuit (1),

providing a response data signal in response to said challenge data signal,

outputting said response data signal, and

delaying and/or prohibiting a the provision and/or the output of said response data signal by adding a noise signal generated from an analog noise source .

11. (Currently Amended) A computer program product embodied on a computer readable medium wherein the computer program product comprises comprising program code means for causing a computer to carry out the steps of the method as claimed in claim 10 when said computer program is run on said [[a]] computer.

12. (New) Information carrier as claimed in claim 3, wherein the signal generation means is an encryption unit.

13. (New) Information carrier comprising a integrated circuit representing a physical unclonable function comprising:

an input means for receiving a challenge signal for challenging said integrated circuit,

a response signal providing means for providing a response data signal in response to said challenge data signal,

an output means for outputting said response data signal, and

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a delay means comprising a noisy read-out amplifier for amplifying the response signal provided by said response signal providing means, the delay means for delaying and/or prohibiting a provision and/or the output of said response data signal.

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